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TREAT SEED GRAIN

By A. G. Johnson, *principal pathologist, Division of Cereal Crops and Diseases*, R. J. Haskell, *senior extension plant pathologist, Extension Service and Bureau of Plant Industry*, and R. W. Leukel, *associate pathologist, Division of Cereal Crops and Diseases, Bureau of Plant Industry*

Treating seed grain for the control of certain smuts and other diseases is a standard recommended practice. It improves yield and quality. It provides good insurance against losses from certain diseases, and, unless the grower is sure that his seed is not contaminated, treatment should be given to all seed wheat, oats, barley, and grain sorghum.

After seed grain has been thoroughly cleaned, treat it according to the following directions for controlling the seed-borne diseases listed below:

Crops and diseases	*Seed treatment* (Numbers refer to descriptions following)
Spring wheat (hard red, white, and durum):	
Stinking smut (bunt)	No. 1, 2, or 5
Winter wheat:	
Stinking smut (bunt)	No. 1 or 2
Oats:	
Loose and covered smuts	No. 2, 3, 4, 5, or 6
Barley:	
Covered smut and black loose smut	No. 2, 3, 5, or 6
Stripe	No. 2
Grain sorghum:	
Covered kernel smut	No. 1

NO. 1. COPPER CARBONATE DUST TREATMENT

(Applicable to spring, winter, and durum wheats for stinking smut control, and to sorghums for the control of covered kernel smut. Not applicable to oats and barley)

Use a full-strength copper carbonate dust (about 50 percent copper), manufactured especially for seed treatment. Apply at the rate of 2 to 2½ ounces per bushel of well-cleaned seed. Mix the seed and the dust in a tight mixing machine until every kernel is thoroughly covered with the dust. Seed thus treated may be stored indefinitely until sown, without injury to germination. With

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CAUTION.—Copper carbonate and ethyl mercury phosphate (Improved Ceresan) dust are poisonous, and formaldehyde fumes are irritating. Therefore, avoid inhaling these compounds as much as possible. Treat seed in a well-ventilated place or outdoors. Wear a dry cloth or a dust mask over the nose and mouth.

TREATING EQUIPMENT

Equipment for applying dusts to seed grain ranges all the way from home-made hand mixers operating at the rate of 25 to 30 bushels an hour to commercial, automatic, power-driven, and gravity-type mixers handling 200 to 500 bushels per hour.

Large-scale seed treatment by local elevators, seed houses, central treating plants, or portable treating outfits is practical and valuable, and is increasing in popularity. By means of it, farmers can be relieved of the inconvenience of treating, and a more uniform and satisfactory job of treating can be done. The task is much easier now than it was several years ago. New materials, methods, and equipment make it possible to treat seed rapidly and effectively at a very low cost per bushel. If it is not desired to purchase a large-capacity commercial machine there are several types of apparatus that can be constructed by local carpenters or sheet-metal workers to handle 200 to 500 bushels an hour.

For spraying formaldehyde on oats, all that is needed to treat a large volume is a good garden sprayer. Nozzles are selected and the sprayer is arranged in such a way as to spray a mist into the falling stream of grain at the rate of 1 quart of the half-and-half formaldehyde solution to 50 bushels of oats.

For applying formaldehyde as a sprinkle or dip there are also several kinds of machines available. Some soak the grain and skim off smut balls, chaff, and lightweight seeds that float to the top, some soak the grain but do not permit skimming, while others sprinkle the seed as it falls past a jet of formaldehyde solution.

For further information consult your county agent or write your State Extension Service or the United States Department of Agriculture

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